REMARKS

Applicant's counsel thanks Examiner Cooney for a careful examination of the present application. The undersigned also thanks Examiner Cooney for the very helpful and productive telephone discussions conducted on July 20, 2009 and September 3, 2009

Herein, claims 35, 44, 54 and 62 have been amended. Support for the amendments can be found in paragraphs [0021], [0022], [0027] and [0028] and Tables 1 and 2 (Example 5). Claim 68 is new. Support for the new claim can be found in paragraphs [0007], [0021], [0022], [0027] and [0028] and Tables 1 and 2 (Example 5)]. Claim 66 has been amended to delete limitations, and claim 67 has been amended to better define the conditions as noted in the present Office action. Claim 49 has been cancelled. No new matter has been added.

Specification Objections

Paragraphs [0033], [0034] and [0048] have been objected to under 35 USC 132(a) as containing new matter.

With regard to paragraphs [0033] and [0034], it was discussed in the telephone interview of September 3, 2009 that the originally filed application contained support for the amendments. Thus, the applicant respectfully requests that the objection to paragraphs [0033] and [0034] be withdrawn.

With regard to paragraph [0048], the applicant respectfully traverses the present objection. Paragraph [0048] was previously amended to provide written description of the invented foam as shown Figure 1, and not to add new matter that the application and Figure 1 does not support. Figure 1 is a graphically representation of acceleration versus velocity of the performance of the invented viscoelastic foam of Example 1 (See paragraph [0011]). As stated by the specification, results of impacting the invented

foam of Example 1 are provided in Figure 1 (graphically), wherein the invented foam of Example 1 exhibited significantly less breakthrough acceleration (i.e., g's) than EPS for impact velocities from 2 to about 6.5 m/s (see paragraph [0048]). Notably, original paragraph [0048] uses "about" to describe the graphical data of Figure 1. The added written description of the invented foam, which is objected to, merely provides a description of the graphical data shown therein, and does not add matter that is not supported by Figure 1 or suggested by the original specification, which specifically states that the invented foam of Example 1 exhibits lower breakthrough acceleration (i.e., g's). Figure 1, at about 2 m/s, does graphically show an acceleration of about 100 g's, and at about 6 m/s an acceleration of about 150 g's. Plainly stated, the graphed line for the invented foam crosses at about the 100 g's mark at about 2 m/s, and at about the 150 g's mark at about 6 m/s.

It has been held that drawings may provide an adequate written description of the invention in the event the written description portion of the application omits such a written description. For example, In re Wolfensperger, 302 F.2d 950, 133 USPQ 537 (CCPA 1962), is an instance of when the original drawings were used to provide written description of the invention under Section 112. In that case, the CCPA stated:

> "... consider that the only informative and significant disclosure in many electrical and chemical patents is by means of circuit diagrams or graphical formulae, constituting "drawings" in the case."
>
> "The practical, legitimate inquiry in each case of this kind is what the drawing in fact discloses to one skilled in the art. Whatever it does disclose may be added to the specification in words without violation of the statute and rule which prohibit "new matter," 35 USC 132, Rule 118, for the simple reason that what is originally disclosed cannot be "new matter" within the meaning of this law. If the drawing,

then, contains the necessary disclosure, it can "form the basis of a valid claim." Id. 133 USPQ at 541-42.

In Wolfensperger, the CCPA held that figure 5 of the application clearly showed that the ring had a mean diameter corresponding to approximately the mean diameter of an annular chamber. In this regard, the CCPA held that the application satisfied the written description requirement, and thereby teaching that drawings may provide the basis for subsequent amendments to the specification without providing the prohibited new matter.

In view of the foregoing, applicant respectfully submits that the description of Figure 1 in amended paragraph [0048] does not add new matter to the application because Figure 1 in fact discloses the added written description. Accordingly, it is requested that the new matter objection is withdrawn.

Claim Rejections – 35 USC § 112

Claims 66 and 67 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement, namely that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As noted above, amended paragraph [0048] provides adequate written description support for claims 66 and 67. The written description support of paragraph [0048], as based upon Figure 1, clearly supports claims 66 and 67. Figure 1 reasonably conveys to one skilled in the art that the inventor had possession of the claimed subject matter at the time of filing. Figure 1 shows the invented foam having a acceleration breakthrough of about 100 g's at about 2 m/s, and about 150 g's at about 6 m/s.

Because drawings can provide the basis for subsequent amendments to the specification, as noted in the Wofensperger case, claims 66 and 67 are supported by the specification, namely in paragraph [0048] and Figure 1.

The present Office action also notes that the term "about" in claims 66 and 67 is new matter. Although the application submits that Figure 1 adequately supports the use of the word "about" because graphical data is being described, it should be further noted that the term "about" does not generally render a claim indefinite, but merely gives flexibility to a value that is not precisely known or shown, and is so understood by those skilled in the art when encountering the term because it provides a clear warning that exactitude is not being claimed. Exactitude is generally not appropriate when describing and claiming graphical data, such as that shown in Figure 1. Accordingly, application respectfully request that the present rejection of claims 66 and 67 be withdrawn.

Claims 39, 40, 57 and 58 are rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. As discussed in the telephone interview, along with the new matter objection of paragraphs [0033] and [0034], the originally filed application contained support for these claims. Thus, the applicant respectfully requests that the present 112 rejection of claims 39, 40, 57 and 58 be withdrawn.

Lastly, claims 66 and 67 are rejected under 35 USC 112, second paragraph, as being indefinite for the use of the term "negligible." Herein, the term "negligible" has been deleted from the claims, and thus the present rejection is rendered moot.

As an additional note, claims 51 and 63 were rejected under 35 USC 112, second paragraph, because they recited "- or." The last response specifically deleted the "-" and thus this rejection should be withdrawn.

Claim Rejections – 35 USC § 103

All of the pending claims have been rejected under 35 USC § 103(a) as being obvious over each of the following references: Apichatachutapan et al. (hereafter "Api"), Lutter et al. (hereafter "Lutter") and Falke et al. (hereafter "Falke"). Of the pending claims, only claims 35, 54 and 66 are independent.

As discussed in the telephone interview of July 20, 2009, independent claims 35 and 54 have been amended to specify that the claimed propylene oxide-extended amine-based polyether polyols are at least 3-functional and have an OH number less than or about 150. The cited references, namely Api, do not teach or suggest a semi-rigid viscoelastic foam having at least 40 parts by weight of a propylene oxide-extended amine-based polyether polyol being at least 3-functional and having an OH number less than or about 150 and having substantially no ethylene oxide extension units. Api's flexible flame-retardant foam is made with 2 (optionally 3) isocyanate-reactive components (see para. [0020]). The first isocyanate-reactive component includes at least 60 parts by weight of EO, and preferably at least 75 parts by weight of EO (see para. [0024]). This is confirmed by Examples 1-6, see Table 1. The first isocyanate-reactive component is 75% EO in all 6 Examples.

The second isocyanate-reactive component can have no EO. The second component is used up to 40 wt % in the Examples (Example 3 – glycol-based polyol). Of the 6 examples, the first EO-rich polyol (75% EO) is present in at least 60 wt% (i.e., Examples 3, 5 and 6). Api's Examples do not combine an amine-based polyether polyol with no EO with the first EO-rich polyol. More specifically, the EO-free second reactive components are always glycol based (Examples 1, 2, 3). In the one example that does utilize an amine-based second reactive component (Comparative Example 1 – does not give Api's result of being flame-retardant), that amine-based component contains 10%

EO. Thus, Api does not teach using at least 40 wt % of an amine-based polyether polyol with no EO.

Api's use of non-amine based polyols containing no EO (i.e., glycol based), instead of amine-based, follows what one skilled in the art would select because amine-based polyols are traditionally used to produce rigid foams, whereas Api is making flexible foams and thus amine-based polyols, in particular with no EO, are not desirable. Any laundry listing of all available polyols in the art, or combinations thereof, invites general experimentation with no clear goal or target in mind. Api is focused on making flexible foams that are flame-retardant, and specifically shows in Comparative Example 1 that selection of an amine-based polyol, which is not EO-free, does not result in Api's goal. The claimed propylene oxide-extended amine-based polyether polyol being at least 3-functional and having an OH number less than or about 150 and having substantially no ethylene oxide extension units is not taught or suggested by Api because such polyol is amine-based and substantially free of EO.

The remaining cited references, namely Falke and Lutter, do not teach or suggest, alone or in combination with Api, the claimed foam. Falke's flexible foams are made with a polyetherol mixture of 3 components - components 1 and 3 (b1 and b3) having EO. The second component is polyetherol based on propylene oxide and/or butylene oxide .." (col. 2, lines 38-40). Falke teaches that the second component is preferably based on glycol or glycerol (as in all Examples) and is present in less than 40 wt %, and preferably from 5-20 wt % (col. 4, lines 8-16). Falke does not teach using at least 40 wt % of a tri-functional amine-based polyether polyol having no EO. Falke instead teaches preferably using glycol or glycerin-based polyols at less than 40 wt% (more preferably 5-20) to make flexible foams. It makes sense Falke tries to reduce the amount of any non-EO component since flexible foams are the focus of that reference and EO extension units promote flexibility. Lutter's soft, flexible foams are made with a polyoxyalkylene-polyol mixture of two components, each having EO. For example, "...

2 to 9 % by weight of terminal ethylene oxide units, ...(Component 1 - col. 1, lines 17-18)" and "... containing from 60 to 85 % by weight of oxyethylene units ... (Component 2 - col. 1, lines 25-27)." Lutter does not teach a tri-functional amine-based polyether polyol with no EO. Instead Lutter specifically uses EO-containing polyols to produce soft, flexible foams, as would be expected. The cited references, alone or in combination, do not teach or suggest the claimed foam of clams 35 and 54. Accordingly, the applicant respectfully submits that the cited references do not render obvious claims 35 and 54, and that the present rejection is overcome.

Independent claim 66 also stands rejected as being obvious in view of Api, Falke and Lutter. The present Office action states that Api's foams exhibit impact properties which are not seen to differentiate from those claimed based on the materials and make-ups of the preparations claimed. It is not seen where Api teaches the claimed impact properties of a semi-rigid viscoelastic foam as claimed. Api is directed to flexible viscoelastic foams that are flame retardant. Falke and Lutter also are directed to flexible viscoelastic foams. As noted above, the cited references do not teach or suggest the invented foam, and thus cannot exhibit impact properties of the claimed foam. Thus, it is submited that the cited references fail to render obvious the claimed foam of claim 66. Accordingly, it is respectfully submitted that the present rejection of claim 66 be withdrawn. All remaining rejected claims are dependent claims. For these reasons, all claims are now believed to be in condition for allowance.

New Claim

Claim 68 has been added. Claim 68 recites, in part, that Part B of the foam composition comprise at least 40 parts by weight of propylene oxide-extended triethanolamine-based polyether polyol having an OH number less than or about 150 and having substantially no ethylene oxide extension units. As discussed in the

telephone interview of July 20, 2009, the cited references do not teach or suggest the foam as claimed. Thus, applicant respectfully requests that claim 68 is in condition for allowance.

Request for Telephone Interview

Should the Examiner have any questions regarding this submission, or should there remain any concerns regarding the patentability of any claims after reviewing the same, the Examiner is invited and requested to please contact the undersigned at the phone number provided below prior to the issuance of a further Office action.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 36211US1.

Respectfully submitted,

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